



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of

Tokuju OIKAWA

Serial No. 09/928,339

Group Art Unit: 1752

Filed: August 14, 2001

Examiner: Thorl Chea

For: PHOTOTHERMOGRAPHIC MATERIAL

DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks,
Washington, D.C. 20231

Sir:

I, Tokuju OIKAWA, a Japanese citizen, having a post office address of c/o Fuji Photo Film Co., Ltd., No.210, Nakanuma Minami-ashigara-shi, Kanagawa 250-0193 Japan, hereby declare and state that:

I graduated from Tohoku University, Graduate School/Faculty of Engineering, Course of Applied Physics in March, 1989, receiving a Master's Degree;

I was employed by Fuji Photo Co., Ltd., in April, 1989, and have been employed by said Company ever since;

I have been engaged in research and development on silver halide photographic materials at the Ashigara Laboratories of said Company from April, 1989 to date.

I am the inventor of the above-identified application. I declare further that I have read all of the documents contained in the file wrapper of the above-entitled application.

I declare further that the test described below was conducted at my direction and under my supervision and the test results are true and correct to the best of my knowledge.

Method:

Three samples, Sample 1 to 3, were prepared. Sample 1 was prepared according to Example 1 of Inoue et al, U. S. Patent 6,100,022, Sample 2 was prepared according to Example 1-2 of Hirano et al, U. S. Patent 6,165,707, and lastly, Sample 3 was prepared according to sample 3 shown in the Table 1 of Ito JP 2001-112072. In each of these samples, the amounts of ammonium ion in all the layers formed on the image-forming layer side of the samples were determined. The determination of the amount of ammonium ion was carried out in the same manner as described in lines 3-17 on page 26 of the specification. Specifically, the amount of NH_4^+ was determined with an ion chromatography measurement apparatus Type 8000 (according to electric conduction degree method), produced by TOSOH CORP., which was provided with a TSKgel IC-Cation as a separation column and TSK guard column IC-C as a guard column, which were produced by TOSOH CORP. As an eluent, 2 mmol/L nitric acid aqueous solution was used at a flow rate of 1.2 mL/min. The column thermostat temperature was 40 °C. NH_4^+ was extracted from all the layers formed on the image-forming layer side of each of the samples by immersing each of samples having a size of 1 x 3.5 cm² into 5 mL of extraction solution consisting of a mixture of acetic acid and ion-exchanged water (1:148) for 2

hours and filtering the solution through a 0.45 μm filter. Then, the NH_4^+ contained in the obtained filtrate was determined.

Results:

The results are shown in Table I below:

Sample	The amount of ammonium ion in all the layers formed on the image-forming layer side of samples(mmol/m^2)
1	0.24
2	0.26
3	0.23

Condition I of the claims requires a specific compound (Formula (1), (2) or (3)) and that the amount of ammonium ion in all the layers formed on the image-forming layer side of the support is $0.06 \text{ mmol}/\text{m}^2$ or less, and Condition II of the claims requires a specific compound (Formula A) and that the layers formed on the image-forming layer side of the support do not substantially contain ammonia. Thus, none of the above samples satisfies Condition I or Condition II of the claims.

As shown in the Table 1 at page 106 of the specification (as amended on November 22, 2002, copy attached), inventive samples show much less temperature and humidity dependency than samples No. 1-3 and No. 1-8 which do not satisfy Condition I. These results are excellent and could not have been expected by satisfying the Condition I.

Also, as shown in Table 2 at page 108 of the specification, copy attached, the inventive samples show much less temperature and humidity dependency than comparative samples which do not satisfy Condition II. These results are excellent and could not have been expected by satisfying Condition II.

I declare further that all statements made herein of my own

knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Dated / . November, 2003

Tokuju Oikawa

Tokuju OIKAWA

Table 1

Sample No	Type of nucleating agent	Type of pH modifier	NH ₄ ⁺ content (mmol/m ²)	Dmin		Dmax	Difference of line width (μm)	Note
				25°C 80% RH 16 h	50°C 75% RH 3 days			
1-1	Y	NH ₄ OH	1.00	0.12	0.17	3.1	18	Comparative
1-3	Y	NH ₄ OH / NaOH	0.20	0.13	0.19	3.9	15	Comparative
1-4	Y	NaOH	0.01	0.17	0.20	4.1	16	Comparative
1-6	No. 62	NH ₄ OH	1.00	0.12	0.12	3.1	19	Comparative
1-8	No. 62	NH ₄ OH / NaOH	0.20	0.12	0.12	3.8	15	Comparative
1-9	No. 62	NaOH	0.01	0.12	0.12	4.1	8	Invention
1-11	No. 84	NaOH	0.01	0.12	0.12	4.3	7	Invention

Table 2

Sample No.	Amount of nucleating agent No. 62	Type of pH modifier	Dmin		Dmax		Film surface pH		Difference of line width (μm)	Note
			25°C 80% RH 16 h	50°C 75% RH 3 days	25°C 10% RH 16 h	50°C 75% RH 3 days	Immediately after preparation	50°C 75% RH 3 days		
2-1	14.9 g	NH_4OH	0.12	0.17	3.7	4.1	5.1	4.8	19	Comparative
2-2	11.1 g	NH_4OH	0.12	0.16	3.1	4.1	5.1	4.8	18	Comparative
2-3	7.5 g	NH_4OH	0.12	0.16	2.2	3.9	5.1	4.8	17	Comparative
2-4	7.5 g	NaOH	0.12	0.12	4.1	4.1	5.1	5.1	8	Invention
2-5	14.9 g	NH_4OH	0.12	0.16	2.2	3.9	6.2	4.8	19	Comparative
2-6	7.5 g	NaOH	0.12	0.15	4.2	4.2	5.9	5.9	8	Invention
2-7	7.5 g	NaOH	0.13	0.17	4.2	4.3	6.2	6.2	9	Invention